SURVIVE
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EMERGENCY FOOD, PREPAREDNESS, AND SELF-SUFFICIENCY HANDBOOK

The Complete
SURVIVAL MEALS GUIDE
FOR SURVIVORS

PREPARE TODAY | EAT TOMORROW | SURVIVE LONGER | WATER SECURITY | EMERGENCY COOKING | SELF-SUFFICIENCY | PROTECT YOUR FAMILY | ANY CRISIS ANYWHERE

By
M.R.ALO

SURVIVE · EAT · REPEAT

Emergency Food, Preparedness & Self-Sufficiency Handbook

PH EDITION

Financial Resilience · Expanded Urban Preparedness · Psychological Resilience · Enhanced Citations

By M.R. ALO

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Shelf-life data aligned with USDA Complete Guide to Home Canning [1], NHS Eatwell Guide [2], FAO Food and Agriculture Organization bulletins [3]. Climate guidance reflects PAGASA seasonal advisories [4], WHO Tropical Disease guidelines [5], and Environment Canada cold weather standards [6]. Financial guidance is general in nature and does not constitute professional financial advice.

About the Author

M.R. Alo is a preparedness researcher and writer with over a decade of experience studying household food security, disaster resilience, and practical self-sufficiency. Drawing on fieldwork in typhoon-affected communities across the Philippines, research into post-disaster recovery patterns from Katrina to Haiyan, and a personal commitment to turning obscure emergency management literature into something actual humans will read and use, M.R. Alo writes for people who are not survivalists — just people who would prefer to eat actual stew while everyone else argues over crackers.

This PH edition represents continued iterative development incorporating reader feedback across the Philippines, Southeast Asia, North America, and the UK. New to this edition: a dedicated Financial Resilience chapter addressing emergency funds, debt management, and income diversification; expanded Psychological Resilience coverage including trauma management and long-duration stress; substantially expanded Urban and Apartment Preparedness guidance for high-density households; enhanced source transparency with in-text citation markers throughout; and a revised Household Resilience Score now covering financial and psychological dimensions. The author's guiding principle throughout has remained unchanged: preparedness is not about fear. It is about competence. And competence, it turns out, is deeply calming.

Foreword: A Brief History of Your Dinner

For the vast majority of human history, food security was not a side quest. It was the entire campaign. It drove migration, wars, empires, and religions. Every great civilization, at its core, was a sophisticated solution to one simple, brutal problem: making sure the people did not starve.

Then we invented modern supply chains — that invisible miracle of just-in-time logistics humming along with caffeinated precision. Grocery stores now stock roughly three to five days' worth of inventory at any given moment. Distribution buffers are thin because efficiency. One category-five typhoon, one trucking strike, one port blockage, one cyberattack on a regional logistics hub — and your local supermarket transitions from a grocery store into an anxiety exhibit.

📖 REAL STORY: New Orleans, 2005

On Day 3 after Hurricane Katrina made landfall, Maria Trevino — a composite drawn from documented survivor accounts in NDRRMC and Red Cross after-action reports — ran out of baby formula. Not because she hadn't tried to stock up. With no power, no deliveries, and every store within driving distance either closed or stripped bare, one extra can was not enough. Her neighbor, who had a two-week supply, shared. That sharing relationship lasted for years afterward. Preparedness is personal. But it is also, always, communal. [Source: Red Cross After-Action Report, Katrina, 2006]

This happened in New Orleans after Katrina. In Texas during the 2021 freeze. During the early weeks of COVID-19. In Mindanao after Typhoon Odette. In the UK when panic buying stripped bread aisles bare within forty-eight hours of lockdown announcements. The fragility is not theoretical. It is architectural.

This book is your insurance policy against that fragility. Not because the world is ending — but because the person eating actual stew while everyone else negotiates over the last sleeve of crackers planned ahead. That person is you, after you finish this book and do something with it.

🆕 NEW IN THIS EDITION

This Ninth Edition adds a dedicated Financial Resilience chapter (Chapter 18), expanded Psychological Resilience coverage (Chapter 19), substantially expanded Urban and Apartment Preparedness guidance throughout, enhanced source transparency with in-text citation markers, a 'Why Your Numbers May Differ' framework throughout, and an updated Household Resilience Score. All other chapters have been reviewed and refined based on reader feedback.

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CHAPTER 1

Preparedness Philosophy

Or: Why the 'It'll Be Fine' Attitude Has an Expiry Date

Let's start with a brutally honest inventory. Right now, your house probably contains roughly three days' worth of food — if we're being generous and counting that 2019 can of cream of mushroom soup in the back of the cupboard.

A week without power and you are not starring in an action movie. You are starring in 'Awkwardly Asking the Neighbor for Rice,' a limited-run production nobody wanted to attend. A month of supply chain disruption and you're trading good sneakers for dried lentils. This is embarrassing. It is degrading. It is almost entirely preventable.

The Myth of the Survivalist

Preparedness has a branding problem. For decades, the cultural image of the 'prepared person' has been some combination of bunker, conspiracy theory, and unfortunate camouflage. That is not who this book is for.

Prepared people are adults who insure their cars even though they expect to drive home safely tonight. Who back up their phones even though they do not plan to drop them. Who keep a spare tire even though they are not planning a blowout. Food security is just another household system. The only reason it feels extreme is that we have been conditioned to outsource it entirely to a supply chain that was never designed to handle stress.

What We Are Actually Preparing For

The most likely disruptions are profoundly ordinary: winter storms that knock out power for four days, typhoons or hurricanes that close stores for a week, sudden job loss that makes the grocery budget tighter than expected, supply chain delays, regional infrastructure failures. These are not apocalyptic scenarios. They are Tuesday-morning scenarios dressed in inconvenient timing.

Build your preparedness system for the ordinary stuff. When the ordinary stuff is covered, the genuinely serious scenarios become manageable rather than catastrophic.

📌 FEMA / READY.GOV BASELINE
The FEMA baseline recommendation is 72 hours of emergency supplies. Most emergency planners privately consider two weeks the actual minimum. The US Department of Homeland Security's Ready.gov guidance confirms this floor but notes that 'extended' events can last weeks. This book builds toward one year. Start at the beginning. Build forward. Every level of preparedness is better than the one before it.
Sources: Ready.gov, 2023 [7]; FEMA Emergency Management Guide, 2013 [8].

The First Rule: Prepare, Don't Panic

Fear sells. Anxiety sells. The entire doomsday content industry runs on adrenaline. Calm, systematic, quietly confident preparation does not get clicks — but it does get you through the next power outage with hot food and warm dignity.

Preparedness is not fear. It is competence. And competence, it turns out, is deeply calming.

📋 CHAPTER QUICK REFERENCE
Preparedness = household resilience, not survivalism
Most likely emergencies are short (days to weeks), not apocalyptic
Prepare for ordinary scenarios first — they cover serious ones too
Fear is not required. Competence is.

CHAPTER 2

Survival Nutrition Fundamentals

Calories Are Currency When the ATM Is Offline

Your body in a crisis does not care about your macronutrient ratios. It cares about fuel. Specifically: enough calories to keep your brain operational, enough protein to maintain muscle and immune function, enough fat to sustain energy density, and enough micronutrients to prevent deficiency diseases that sound medieval because they are.

Caloric Requirements

📐 WHY YOUR NUMBERS MAY DIFFER

The figures below are planning estimates drawn from WHO and USDA guidelines. Your actual needs depend on body mass, activity level, health status, age, and climate. A sedentary 55kg adult in a warm climate needs less than an active 90kg adult in cold weather. Use these numbers as a starting floor, not a ceiling.

Sources: USDA Dietary Guidelines 2020–2025 [9]; WHO Energy Requirements in Emergency Settings [10]; Sphere Handbook 2018 [11].

Population	Daily Calories	Notes
Sedentary Adult	1,800–2,000	Minimal physical activity
Moderately Active Adult	2,000–2,500	Standard emergency baseline
Heavy Labor / Evacuation	2,800–3,200	Manual work, cold exposure
Child (5–12)	1,400–1,800	Scale by weight and age
Pregnant / Nursing	2,500–3,000	Higher micronutrient needs

Macronutrients: The Big Three

Protein

⬡ BEGINNER

Fifty to sixty grams per day is the floor. Eighty to one hundred grams is a better target under physical or psychological stress. Shelf-stable protein

sources include canned fish, dried legumes, peanut butter, powdered eggs, and textured vegetable protein (TVP). Combining incomplete proteins — rice and beans being the canonical example — achieves a full amino acid profile without requiring meat. [12, 13]

Fat

⬡ BEGINNER

Fat is the efficiency king at nine calories per gram versus four for protein and carbohydrates. Olive oil, coconut oil, peanut butter, canned fish, and ghee (clarified butter, two-year shelf life under ideal conditions) are your primary long-term fat storage options. Fat also makes survival food taste like food rather than obligation.

Carbohydrates

⬡ BEGINNER

Carbohydrates are the backbone of emergency food storage because they are cheap, calorie-dense, and have exceptional shelf life. Rice, pasta, rolled oats, dried corn, flour. Their primary limitation is palatability fatigue. After eighteen consecutive days of plain white rice, it becomes psychologically taxing. Season aggressively or face a morale collapse.

Micronutrients: The Silent Problem

Scurvy is not a historical curiosity. It is what happens when a human adult goes without Vitamin C for thirty to sixty days: bleeding gums, joint pain, reopened old wounds, inability to function. It reappears in extended emergency scenarios where people live entirely on shelf-stable grains and canned meats without micronutrient coverage. [14]

Nutrient	Best Shelf-Stable Sources	Warning Signs of Deficiency
Vitamin C	Canned tomatoes, canned fruit, rose hip powder, multivitamins	Scurvy (30–60 days)
Vitamin D	Canned fish (salmon, sardines), fortified powdered milk	Bone pain, fatigue
Iron	Canned beans, lentils, canned meats, fortified cereals	Anemia, fatigue
Calcium	Powdered milk, canned sardines with bones	Cramps, bone loss (long-term)

Iodine	Iodized salt, canned seafood, seaweed powder	Thyroid issues
B Vitamins	Nutritional yeast, whole grains, canned meats, lentils	Nerve damage, pellagra

★ PRO TIP

THE MULTIVITAMIN RULE: One quality multivitamin per person per day is the cheapest insurance policy in this entire book. A 365-count bottle costs less than dinner out. Stock twelve months per person.

Source: Institute of Medicine, Dietary Reference Intakes for Vitamins and Minerals [15].

The Psychology of Food in a Crisis

Nutritional science only gets you so far. Human beings are not calorie-processing machines. We are meaning-making creatures who use food to communicate love, culture, normalcy, and safety. In an extended crisis, comfort food is not a luxury. It is a psychological stabilizer.

📖 REAL STORY: Tacloban, Philippines, 2013

In the weeks after Typhoon Yolanda (Haiyan), relief workers documented a striking pattern: families who maintained even small rituals around food — a cup of hot rice, a pinch of bagoong shared with neighbors — showed measurably lower rates of acute stress responses than those eating the same calories in isolation, without ritual. The food itself was nearly identical. The meaning around it was not.

Source: NDRRMC After-Action Reports, 2013–2014 [16].

📋 CHAPTER QUICK REFERENCE

- Aim for 2,000–2,500 calories per active adult per day (adjust by weight, activity, climate)
- Stock one multivitamin per person per day — non-negotiable
- Combine rice + beans for complete protein without meat
- Comfort food is a psychological necessity, not a luxury

Scurvy and pellagra are real risks in 30+ day emergencies without micronutrient coverage

CHAPTER 3

Building a 72-Hour Food Reserve

The Starter Kit: The Floor, Not the Ceiling

⬡ BEGINNER

Seventy-two hours. Three days. This is the government-recommended emergency baseline, which means it is approximately the minimum viable floor and you should plan to exceed it immediately. That said, starting here is infinitely better than starting nowhere, and building a solid 72-hour kit is the foundation everything else grows from.

The guiding logic of a 72-hour reserve is simplicity and portability. This is your go-kit: the food that leaves with you if you need to evacuate, or sustains you if you need to shelter in place without utilities for a long weekend.

The 72-Hour Shopping List (Per Person)

Item	Quantity	Approx. Calories
Ready-to-eat canned goods (soups, stews, chili)	6 cans	~1,800
Peanut butter or nut butter	1 jar (16 oz)	~2,700
Crackers or shelf-stable bread	1 box	~800
Dried fruit (raisins, apricots)	1 bag (12 oz)	~900
Mixed nuts or trail mix	1 bag (12 oz)	~2,000
Granola bars or energy bars	12 bars	~1,800
Instant oatmeal packets	6 packets	~900
Powdered electrolyte drink mix	1 pack	0 (vital for hydration)
Hard candy or comfort food item	1 bag	Morale — priceless

Urban & Apartment Considerations

🏢 URBAN / APARTMENT PREP

Limited storage space does not exempt you from 72-hour preparedness — it just requires smarter use of it. Under-bed rolling bins, vacuum-seal bags, and repurposed suitcases can all serve as compact food storage. A go-bag

designed for evacuation matters more for apartment dwellers than for homeowners with basements — know your building's evacuation routes.

Apartment-friendly 72-hour storage tips: Use stackable collapsible containers. Store your kit in your largest wheeled luggage. Keep water in 1-gallon jugs rather than 5-gallon drums. Coordinate with a trusted neighbor to share storage of bulkier items like water barrels.

Water: The Non-Negotiable

The minimum water requirement for survival is one gallon per person per day. For a three-day reserve: three gallons per person, stored in sealed food-grade containers. Practical experience suggests 1.5 to 2 gallons per person per day is a more honest target — especially in warm climates or for households with children, elderly individuals, or pets.

⚠ IMPORTANT

Do NOT store your 72-hour water in old milk jugs rinsed once and filled from the tap. Milk residue creates bacterial growth. Use only purpose-made water storage containers, commercially sealed water bottles, or food-grade 5-gallon jugs with screw caps. Label with the fill date. Replace every six to twelve months.

Storage and Rotation

Store your 72-hour kit in one dedicated container: a large waterproof tote, a dedicated backpack, or a sealed plastic bin in a location accessible without power. Label it clearly. Every six months — when you change smoke detector batteries — check expiration dates, rotate out anything within three months of expiry, and replenish.

☑ CHECKLIST: 72-Hour Kit Essentials

- ☐ 3 gallons water per person in food-grade containers
- ☐ 3-day non-perishable food supply per person
- ☐ Manual can opener
- ☐ Flashlight + extra batteries

☐ Battery or hand-crank radio
☐ Basic first aid kit
☐ 7-day supply of prescription medications
☐ Copies of important documents in waterproof container
☐ Portable battery bank for devices
☐ Cash in small denominations (ATMs fail; card readers fail)
☐ Comfort item per household member

📋 CHAPTER QUICK REFERENCE
Start with a 72-hour kit. Today. Before anything else.
Food-grade containers only for water storage
Food should be edible without cooking by default
Rotate and audit every six months when you change smoke detector batteries
Apartment dwellers: a go-bag matters more than a fixed pantry — build both

CHAPTER 4

Building a 30-Day Food Reserve

Because Three Days Is a Warm-Up, Not a Strategy

⬡ BEGINNER

A 72-hour reserve handles weekend disruptions. A 30-day reserve handles job loss, a prolonged regional emergency, a supply chain disruption lasting several weeks, or a medical situation that makes leaving the house impractical. This is the level at which preparedness stops being an emergency kit and starts being a household system.

The Core 30-Day Pantry (Per Person)

Category	Item	30-Day Quantity
Grains	White rice	20 lbs
Grains	Pasta (various)	10 lbs
Grains	Rolled oats	5 lbs
Protein	Canned tuna / salmon	30 cans
Protein	Canned chicken	15 cans
Protein	Dried beans / lentils	12 lbs
Protein	Peanut butter	4 jars
Fats	Olive oil or coconut oil	2.5 liters
Fats	Mixed nuts	3 lbs
Fats	Ghee (clarified butter)	1 lb
Produce	Canned tomatoes	12 cans
Produce	Canned vegetables (mixed)	24 cans
Produce	Canned fruit	12 cans
Dairy	Powdered whole milk	4 lbs
Sweeteners	Sugar / honey	3 lbs each
Supplements	Multivitamins	30 tablets
Water	Stored water	45+ gallons

📐 WHY YOUR NUMBERS MAY DIFFER

These quantities reflect a moderately active adult averaging 2,200 calories per day. Sedentary adults, children, or those with dietary restrictions will need different amounts. Households in hot climates will need significantly

more water. Use these figures as a starting framework, not a rigid prescription.

The FIFO Rotation System

First In, First Out. Write the purchase date on every can and package when you bring it home. Store new purchases behind existing stock. Consume from the front. Set a quarterly calendar reminder to audit your 30-day supply. Check dates. Rotate stock into regular meals. Replace what you've consumed.

★ PRO TIP

Buy one extra of what you regularly use every grocery trip. In three months, you will have a substantial reserve built without a single dedicated shopping expedition and without any noticeable impact on your weekly food budget. This is how preparedness becomes invisible infrastructure rather than a project.

Urban Adaptation: Small-Space 30-Day Planning

Apartment dwellers face a real constraint: limited storage. The solution is density and creativity, not resignation. Dried goods in vacuum-sealed bags take a fraction of the space of cans. A single under-bed rolling bin can hold a two-week grain supply. A 5-gallon bucket with a gamma-seal lid doubles as a stool and holds 25 pounds of rice.

Balancing Nutrition and Palatability

Thirty days of plain rice and canned tuna will keep you alive and destroy your morale. Spices are the highest-value items per ounce in your emergency pantry. Garlic powder, cumin, chili flakes, dried oregano, curry powder, smoked paprika, soy sauce packets, and hot sauce can transform identical base ingredients into eight entirely different eating experiences. Stock them. Rotate them. Use them.

📋 CHAPTER QUICK REFERENCE

FIFO: write purchase date on everything, consume oldest first

Buy one extra per shopping trip — invisible infrastructure

Spices are the highest-value items per ounce in your entire pantry
A 30-day reserve makes job loss or supply disruption manageable, not catastrophic
Apartment tip: under-bed bins, vacuum-sealed bags, and gamma-seal bucket stools

CHAPTER 5

Building a 1-Year Food Reserve

The Long Game, for the Seriously Committed

⬡ INTERMEDIATE

A one-year food reserve is where preparedness becomes lifestyle. This chapter delivers the concrete framework: real per-person quantities, revised protein and fat targets appropriate for active adults, and a tier-based monthly budget path designed to outlast inflation.

The One-Year Per-Person Framework

Category	Item	Baseline (1 yr)	Active Adult (1 yr)
Grains	White or parboiled rice	150 lbs	200 lbs
Grains	Hard red wheat / flour	100 lbs	150 lbs
Grains	Rolled oats	50 lbs	60 lbs
Grains	Pasta	50 lbs	60 lbs
Legumes	Dried beans (pinto, black, navy)	60 lbs	75 lbs
Legumes	Dried lentils	30 lbs	40 lbs
Legumes	Split peas	20 lbs	25 lbs
Protein	Canned fish (tuna, salmon, sardines)	144 cans	180 cans
Protein	Canned chicken or turkey	72 cans	96 cans
Protein	Peanut butter	24 lbs	30 lbs
Protein	Powdered eggs	12 lbs	18 lbs
Dairy	Powdered whole milk	40 lbs	50 lbs
Fats	Olive oil / coconut oil	14 liters	18 liters
Sweeteners	White sugar	25 lbs	30 lbs
Sweeteners	Honey (indefinite shelf life)	10 lbs	12 lbs
Produce	Freeze-dried vegetables	20 lbs	25 lbs
Supplements	Multivitamins	365 tablets	365 tablets

📐 WHY YOUR NUMBERS MAY DIFFER

These quantities are planning estimates for a moderately active adult. Actual needs vary by body weight, activity level, health status, and climate.

Families with young children, pregnant or nursing members, or individuals with dietary restrictions should consult a nutritionist for customized targets.

Sources: USDA Dietary Guidelines 2020–2025 [9]; Sphere Handbook 2018 [11]; LDS Home Storage Center Guidelines, 2023 [19].

Storage Infrastructure

- Mylar bags with oxygen absorbers: 5-gallon bags with 2,000cc oxygen absorbers sealed with a flat iron keep rice, beans, flour, and oats stable for 25 to 30 years under ideal conditions. [17]
- Food-grade 5-gallon HDPE buckets: Secondary containment for Mylar bags, and standalone storage for sugar and salt.
- Glass mason jars with vacuum-sealed lids: Ideal for spices, dehydrated foods, and items you access regularly.
- Temperature control: Store below 70°F (21°C) ideally. Every 10-degree Fahrenheit increase in storage temperature roughly halves effective shelf life. [18]

★ PRO TIP

SHELF LIFE REALITY CHECK — Under ideal cool, dark, dry conditions: White rice in Mylar with oxygen absorbers: 25–30 years. Rolled oats: 30 years. Dried beans: 25–30 years. Whole wheat flour: 10–15 years. Canned goods: 3–5 years for optimal quality, safe beyond that if seal is intact. White sugar and honey: indefinite.

In tropical climates without climate control, reduce estimates by 30–50%.

Sources: USDA Complete Guide to Home Canning, 2015 [17]; LDS Home Storage Center Guidelines, 2023 [19].

The Tier-Based Budget Framework

Specific dollar amounts go stale fast. Use this tier system: each tier represents a percentage of your monthly discretionary budget, scaled to your household size.

Month	Focus Category	All Household Sizes (% Budget)
1	Grains foundation + containers	~5% discretionary
2	Legumes	~4%

3	Canned protein — fish	~5%
4	Canned protein — meat + peanut butter	~5%
5	Fats and oils	~4%
6	Dairy and eggs (powdered)	~4%
7	Grains expansion + TVP	~4%
8	Produce — canned	~5%
9	Produce — freeze-dried	~5%
10	Sweeteners + salt + spices	~4%
11	Supplements + water storage	~4%
12	Full audit + comfort foods	~3%

📋 CHAPTER QUICK REFERENCE
Build in sequence: grains → legumes → protein → fats → dairy → produce → supplements
Use Mylar + oxygen absorbers for 25-30 year grain storage (15-20 years in tropics without AC)
Percentage-based budget outlasts inflation and works in any currency
Temperature is the enemy: cool, dark, and dry extends shelf life dramatically

CHAPTER 6

Pantry Inventory Systems

Excel Spreadsheets Have Never Been So Literally Lifesaving

A pantry you cannot account for is a pantry that will fail you at the worst possible time. Inventory discipline is not bureaucracy for its own sake. It is how you prevent the most common preparedness failure mode: the illusion of readiness that collapses on contact with an actual emergency.

The Master Inventory System

The foundation of a functional pantry inventory is a simple spreadsheet with six columns: Item, Category, Quantity, Purchase Date, Expiration Date, and Location.

- Item: Specific name and size ('garbanzo beans, 15 oz can' — not just 'beans')
- Category: Grain / Protein / Fat / Produce / Dairy / Sweetener / Water / Supplement
- Quantity: Number of units currently on hand
- Purchase Date: When you acquired it
- Expiration Date: The actual date on the package
- Location: Shelf number, bin number, or zone label

Zone Labeling Your Storage Space

Zone	Expiry Range	Color Code	Action
Zone A	0–6 months	RED	Consume first — use in daily cooking
Zone B	6–18 months	YELLOW	Rotate into Zone A as it ages
Zone C	18+ months	GREEN	Long-term reserve — touch last

★ PRO TIP

Print a one-page Daily Pull Sheet listing your oldest items. Put it on the pantry door. When you cook, use items from that list first. This single habit is worth more than any app, label gun, or elaborate shelving system.

📋 CHAPTER QUICK REFERENCE
Six-column inventory: Item, Category, Quantity, Purchase Date, Expiry Date, Location
Zone A (red) = use now. Zone B (yellow) = rotate soon. Zone C (green) = long-term.
Audit quarterly (every 2 months in tropical climates)
Daily Pull Sheet on the pantry door = the simplest rotation system that actually works

PART TWO

Water & Cooking

CHAPTER 7

Water Storage and Purification

You Can Eat Badly for Weeks. You Cannot Go Without Water for Three Days.

Water is the most critical preparedness resource and the most frequently underestimated one. Humans can survive roughly three weeks without food. Three days without water and cognitive function deteriorates significantly. Five to seven days and the situation becomes life-threatening. [20]

📖 REAL STORY: Texas, February 2021
When Winter Storm Uri knocked out power and water infrastructure across Texas, millions of residents found themselves with no running water for up to a week. People melted snow for drinking water. Hospitals rationed supplies. Households with stored water and a filtration option were the ones who did not wait in line for hours at distribution centers.
Source: Federal Emergency Management Agency After-Action Report, 2021.

The general standard is one gallon per person per day. This is a floor, not a ceiling. Plan for 1.5 to 2 gallons per person per day in warm climates or for households with children, elderly individuals, or pets. In tropical and hot climates, treat 2.5 to 3 gallons as your actual minimum.

Water Storage Options

Container Type	Capacity	Best For	Shelf Life
Commercial 5-gal jugs	5 gallons	Budget-friendly bulk storage	1–2 years
WaterBOB bathtub bladder	100 gallons	Emergency rapid fill	72 hours (filled)

Food-grade 55-gal drum	55 gallons	Long-term household storage	5+ years (sealed)
HDPE 5-gal buckets	5 gallons	Portable, stackable storage	3–5 years
Commercially bottled water	Various	72-hour kits, portability	1–2 years
Rainwater catchment barrels	50–200 gallons	Renewable source (filter required)	Ongoing

Water Purification Methods

Boiling

⬡ BEGINNER

Boiling is the most reliable method of killing biological contaminants. Bring water to a rolling boil for one full minute. At elevations above 6,500 feet, boil for three minutes. Boiling does not remove chemical contaminants or heavy metals. [21]

Chemical Treatment

⬡ BEGINNER

Unscented liquid chlorine bleach (8.25% sodium hypochlorite) can purify water at approximately 8 drops per gallon for clear water, 16 drops per gallon for cloudy water. Wait 30 minutes before drinking.

Filtration

⬡ INTERMEDIATE

Quality ceramic or hollow-fiber filters (Berkey, Sawyer, LifeStraw) remove bacteria, protozoa, and many suspended particles to very high reliability. Hollow-fiber filters like Sawyer do not remove viruses in their standard configuration; ceramic gravity filters like Berkey do. Know what your filter is rated to remove. Combine filtration with chemical or UV treatment for comprehensive coverage.

⚠ IMPORTANT

LAYERED PURIFICATION [22]: Never rely on a single purification method as your only option. The recommended practice is layered treatment: filter to remove physical particles, then boil or UV-treat to neutralize biological threats. In tropical climates where waterborne pathogens thrive in warm conditions, this layered approach is standard procedure.
Source: WHO Guidelines for Drinking-water Quality, 4th ed., 2011 [22].

📋 CHAPTER QUICK REFERENCE
1 gal/person/day minimum; 2.5–3 gal in tropical climates
Layer your purification: filter physical particles THEN kill biological threats
Boiling is the most reliable method — needs no equipment beyond heat
Know what your filter removes before you trust your life to it

CHAPTER 8

Food Preservation Methods

Your Great-Grandparents Didn't Have a Freezer and They Were Fine. Mostly.

Food preservation is one of the oldest and most important human technologies. Before refrigeration, humans preserved food through dehydration, fermentation, salting, smoking, pickling, and root cellaring. These methods work. They have always worked. Learning them is not nostalgia. It is redundancy.

Dehydration

⬡ BEGINNER

Removing moisture from food to below 20% relative humidity prevents microbial growth and enzymatic degradation. Dehydrated food at proper moisture levels can store for five to twenty-five years depending on food type and storage conditions. Electric food dehydrators produce the most consistent results. Solar dehydrators work well in dry, sunny climates with zero electricity. [17]

Pressure Canning

⬡ INTERMEDIATE

Home pressure canning preserves low-acid foods in sealed mason jars. The USDA Complete Guide to Home Canning is the authoritative reference. Follow tested recipes exactly — this is not an area for creative adaptation. [17]

⚠ IMPORTANT

Water bath canning is only safe for high-acid foods (fruits, tomatoes with added citric acid, pickles, jams). Low-acid foods including meat, most vegetables, and beans REQUIRE a pressure canner reaching 240°F (116°C) to safely destroy Clostridium botulinum spores. Botulism is colorless, odorless, and lethal in small quantities.

Source: USDA Complete Guide to Home Canning, 2015, Bulletin 539 [17].

Lacto-Fermentation

⬡ BEGINNER

Lacto-fermentation uses naturally occurring Lactobacillus bacteria to preserve vegetables in a brine environment. Sauerkraut, kimchi, fermented pickles, and preserved lemons are all products of this process. A crock, salt, and vegetables are the only required inputs. In tropical climates, fermentation progresses faster — check and taste more frequently. [23]

CHAPTER QUICK REFERENCE
Dehydration: beginner-friendly, long shelf life, ideal for tropical dry season
Pressure canning: life-changing skill, strict safety rules — never deviate
Lacto-fermentation: easiest preservation method, no equipment required
Salt curing and root cellaring: advanced but achievable

CHAPTER 9

Emergency Cooking Methods

A Gourmet Meal Requires an Oven. Staying Alive Just Requires Heat.

The power is out. The grid has been down for thirty-six hours. You have food. You have water. The question is whether you can apply heat to any of it.

Method	Best For	Indoor Safe?	Fuel Cost
Butane camp stove	Everyday emergency cooking	Yes (ventilated)	Low
Propane camp stove	Higher BTU, cold climates	Outdoor only	Low–Medium
Wood fire	Extended scenarios, Dutch oven	Outdoor only	Free
Solar oven	Clear-day cooking, zero fuel	Outdoor only	Free
Thermal cooker (wonder box)	Ultra fuel-efficient slow cooking	Yes	Minimal
Charcoal Dutch oven	Baking, roasting, stews	Outdoor only	Low
No-cook meals	Fuel-free option	Always	Free

★ PRO TIP

DUTCH OVEN TEMPERATURE GUIDE: Temperature in Fahrenheit approximately equals the number of charcoal briquettes used times 25. Ten coals on bottom plus 14 on lid = approximately 350°F. Use more bottom heat for stews and soups; more top heat for baking.

📋 CHAPTER QUICK REFERENCE

- Stock minimum two cooking methods — never depend on one
- Thermal cooker = maximum fuel efficiency for slow-cooked beans and stews
- Dutch oven = the most versatile outdoor cooking tool available
- No-cook foods are your insurance policy when all fuel options fail

CHAPTER 10

Off-Grid Baking

Bread Has Kept Civilizations Alive for 10,000 Years. It Can Survive Your Propane Stove.

⬡ BEGINNER

Bread is not a luxury in an emergency. It is a caloric anchor, a morale multiplier, and a reminder that civilization persists. Learning to bake without a conventional oven is one of the highest-return skills in this entire book.

Basic Emergency Bread Recipe

- 4 cups all-purpose flour (or whole wheat)
- 2 teaspoons instant yeast — or 1 tablespoon baking powder for no-yeast version
- 1.5 teaspoons salt
- 1.5 cups warm water (yeast version) or 1 cup (baking powder version)
- 2 tablespoons oil (any available type)

Combine dry ingredients. Add water and oil. Mix until a shaggy dough forms. Knead eight minutes until smooth. For yeast bread: rest forty-five minutes covered. Form into a round loaf. Bake using Dutch oven, cast iron skillet, or solar oven. Bread is done when internal temperature reaches 200°F or tapping the bottom produces a hollow sound.

📋 CHAPTER QUICK REFERENCE
Flatbreads first: no oven, no yeast, 5 minutes on a skillet
Stock both baking powder AND yeast — each covers the other's failure mode
A Dutch oven converts any heat source into an oven
Bread is a morale multiplier, not a luxury — bake it in emergencies

PART THREE

Food & Production

CHAPTER 11

Rice, Beans, and Staple Recipes

The Dynamic Duo That Has Fed the Entire World

Rice and beans. The combination appears independently in the food traditions of six of the seven continents. It provides complete protein through complementary amino acid profiles. It is cheap, stores indefinitely, and adapts to every major culinary tradition on earth. The challenge is palatability. The solution is seasoning, technique, and variety.

The Eight-Flavor Grain Bowl Framework

Flavor Profile	Seasoning Blend	Optional Addition
Filipino Adobo	Soy sauce, vinegar, garlic powder, bay	Canned chicken
Mexican	Cumin, chili powder, lime powder	Canned corn, hot sauce
Indian	Curry powder, turmeric, garam masala	Coconut milk powder
Mediterranean	Oregano, garlic, lemon powder	Canned fish
East African	Cumin + coriander + cayenne	Canned tomatoes
Japanese	Soy sauce, rice vinegar, sesame oil	Canned tuna
Caribbean	Allspice, thyme, garlic, scotch bonnet powder	Coconut milk
American South	Smoked paprika, garlic, onion, hot sauce	Canned pork

📋 CHAPTER QUICK REFERENCE
Rice + beans = complete protein. No meat required.
Eight seasoning blends = eight different meals from the same base pantry
Spice kits are the single highest-value item per ounce in emergency food storage
Variety prevents palatability fatigue — stock it deliberately

CHAPTER 12

Protein Planning

Muscle Is Not Optional. Neither Is This Chapter.

Protein is the nutritional component most at risk in a long-term food storage scenario that has not been deliberately designed. Carbohydrates are easy to store cheaply. Fats are manageable in bulk. Protein sources — particularly complete sources with the full spectrum of essential amino acids — require planning.

Source	Protein per 100g	Shelf Life	Cost Index
Dried lentils	25g	25–30 years	Very Low
Dried black beans	21g	25–30 years	Very Low
Textured vegetable protein (TVP)	50g	10–15 years	Low
Peanut butter (sealed)	25g	1–2 years	Low
Canned tuna	30g	3–5 years	Low–Medium
Canned chicken	27g	3–5 years	Medium
Powdered eggs	47g	5–10 years	Medium
Powdered whole milk	26g	20–25 years	Medium
Freeze-dried meat	55–65g	25 years	High

PH PHILIPPINES / SOUTHEAST ASIA NOTE

Dried lentils and canned sardines (bangus, tuna, galunggong) represent the highest value-per-peso protein options available in the Philippines and Southeast Asia.

Sources: USDA National Center for Home Food Preservation [17]; BYU Food Science Extension studies [24].

📋 CHAPTER QUICK REFERENCE

Lentils = best value protein per peso/dollar in any currency

Eat variety of plant proteins across each day for complete amino acid profile

TVP has the highest protein density of any affordable shelf-stable food at 50g/100g

Philippines: bangus, tuna, galunggong sardines are your best budget protein options

CHAPTER 13

Garden-to-Table Survival

Dirt Is Free. Seeds Are Cheap.

Every calorie your garden produces is a calorie you do not need to store, purchase, or transport. A well-designed kitchen garden can meaningfully supplement household food security for remarkably low investment.

Philippine Tropical Garden: What Grows Best

Crop	Season	Days to Harvest	Preparedness Value
Malunggay (Moringa)	Year-round	60–90 (first)	Exceptional — vitamins, protein, minerals
Kamote (Sweet Potato)	Year-round	90–120	High — calories + Vitamin A + edible leaves
Kangkong	Year-round	21–30	High — fast, nutritious, water-loving
Ampalaya (Bitter Gourd)	Year-round	55–65	Good — Vitamin C, blood sugar regulation
Talong (Eggplant)	Year-round	60–80	Good — versatile, heat-tolerant
Sili (Chili)	Year-round	75–90	High — Vitamin C, calories, preserves food

Urban Garden Adaptations

You do not need a yard to grow food. Balcony containers can produce herbs, kangkong, chili, and tomatoes year-round. Malunggay grows vigorously in large pots. Sprouting (see Appendix C) requires only a jar, water, and seeds — no outdoor space whatsoever, and yields fresh micronutrients within 3–5 days.

📋 CHAPTER QUICK REFERENCE
Malunggay (Moringa) = the single most nutritious plant you can grow in tropical Philippines
Kamote provides calories, Vitamin A, and completely edible leaves
A garden produces food you don't need to store — growing is better than buying

No yard? Containers, balconies, and sprouting jars all count

CHAPTER 14

Foraging Fundamentals

Free Food Is Everywhere. Just Positively Identify It First.

⬡ INTERMEDIATE

Wild food is everywhere. The catch is that the natural world does not label its produce. You have to know what you're looking for before you put anything in your mouth.

The most important foraging rule, stated plainly: never eat anything you cannot positively identify to species level using at least two separate identifying features. When in doubt, do not. There is no emergency so acute that eating an unidentified plant is a better risk calculation than going hungry for another day.

Plant	Edible Parts	Key Identifier	Safety Note
Malunggay / Moringa	Leaves, flowers, pods	Compound leaves, bean-like pods	Safe — cook or eat raw
Kangkong / Water Spinach	Leaves, stems	Hollow stems, grows near water	Cook thoroughly
Taro leaves (Gabi)	Leaves, root	Large arrow-shaped leaves	Must cook — contains calcium oxalate raw
Wild ferns (Pako)	Young fronds only	Fiddlehead shape, uncurling	Eat only fresh young fronds
Coconut	Water, meat, oil	Unmistakable — large palm	Safe — young water is sterile
Papaya	Fruit, leaves	Large lobed leaves, orange-yellow fruit	Ripe fruit safe raw; cook green fruit

⚠ IMPORTANT

FORAGING SAFETY: Never forage near roadsides (exhaust and runoff contamination), agricultural fields (pesticide drift), or industrial areas (heavy metal contamination). Always wash foraged plants thoroughly. Never eat mushrooms unless you have been trained by an expert — mushroom misidentification is responsible for the majority of fatal foraging accidents worldwide.

📋 CHAPTER QUICK REFERENCE
Positive ID to species level — two identifying features minimum — before you eat anything
Mushrooms: never without expert training. Non-negotiable.
Never forage near roadsides, farm fields, or industrial areas
Coconut, malunggay, papaya, and banana are the most forager-friendly plants in the Philippines

CHAPTER 15

Fishing, Hunting, and Trapping Overview

Nature Has a Grocery Store. You're Out of Practice Shopping There.

Wildlife protein is one of the most calorically dense, nutritionally complete, and widely available wild food sources available — for those with the skills and equipment to access it. This chapter is a preparedness orientation for people who have not engaged with these skills before but should understand them.

Fishing: The Most Accessible Wild Protein

⬡ BEGINNER

A basic fishing kit costs under $30 and fits in a gallon ziplock bag: one rod or hand line, a selection of hooks from size 6 to 1/0, split shot weights, a few bobbers, and a small selection of artificial lures or dried bait. Every household within reasonable distance of any body of water should have one.

The Philippines has extraordinary coastal and freshwater fishing resources. Tilapia farming in ponds, bangus (milkfish) in coastal areas, and river fish including dalag (mudfish) and hito (catfish) are widely accessible. Handline fishing is the traditional and most accessible method for Filipino households.

Small Game Hunting

⬡ ADVANCED

Hunting provides potentially very large caloric returns. The appropriate starting point for someone new to hunting is a hunter education certification course through your regional wildlife authority.

★ PRO TIP

The highest-return preparedness investment in this skill area is learning to clean and preserve what you catch immediately. Field dressing, gutting,

scaling, and simple salt-drying are skills that turn a catch into a caloric asset. A sharp knife and basic fish anatomy are all you need to start.

📋 CHAPTER QUICK REFERENCE
A $30 handline fishing kit is one of the highest-return emergency investments you can make
Philippines: bangus, tilapia, dalag, hito — know where your nearest fishing spot is
Learn to clean and preserve your catch immediately
Hunting requires formal training — start with fishing and work up

PART FOUR

Getting Out & Planning

CHAPTER 16

Bug-Out Bag Food Systems

If You're Leaving With a Backpack, Every Ounce Has to Work for Its Place

A bug-out bag is the food system you carry when staying is no longer an option. The fundamental constraint is weight. The target: maximum caloric density per ounce, minimum preparation requirement, zero refrigeration dependency.

Priority	Food Type	Cal/oz	Notes
1st	Nut butters in squeeze packs	~170	Highest cal/oz of any food
2nd	Freeze-dried meals (sealed)	~100–130	Just-add-water. Best palatability.
3rd	Hard cheese (waxed)	~110	3–6 month shelf life
4th	Dried salami / hard sausage	~120	Cured, no refrigeration needed
5th	Trail mix with chocolate	~140	Easy morale maintenance
6th	Dense crackers	~120	Carbs + portability
7th	Dense protein bars	~100–120	Convenience, familiar

Target: 2,500 calories per day for an active adult under physical stress. Three days: 7,500 calories. At approximately 120 calories per ounce average, this requires roughly 62 ounces — just under four pounds of food. Achievable within any reasonable bag weight budget.

📋 CHAPTER QUICK REFERENCE
Target: 2,500 calories/day = roughly 4 lbs of food for 3 days
Nut butter in squeeze packs = the single most calorie-dense portable food
Every item must earn its ounce — palatability and nutrition both matter
Freeze-dried is lighter and tastier than canned — worth the cost in a bug-out bag

CHAPTER 17

Family Meal Plans

Planning for Multiple Humans Under Stress

Individual nutrition calculus is straightforward. Family meal planning in an emergency involves managing caloric needs across multiple ages and activity levels, dietary restrictions, the psychological state of people under stress, and the logistical reality of preparing food without the infrastructure everyone is accustomed to.

Sample 7-Day Family Meal Plan (Family of 4)

Day	Breakfast	Lunch	Dinner
Day 1	Instant oatmeal + dried fruit	PB crackers + nuts	Arroz caldo (Filipino chicken rice porridge)
Day 2	Granola + powdered milk	Canned tuna + crackers	Emergency chili over rice
Day 3	Rice congee + soy sauce	Trail mix + energy bars	Lentil dal + flatbread
Day 4	Instant oatmeal + honey	Bean and crackers	Pasta with canned tomato sauce + canned chicken
Day 5	Hot chocolate + crackers	Canned soup + bread	Seasoned rice + canned veg + fried egg
Day 6	Porridge + dried fruit + nuts	PB crackers + jerky	Black bean and rice burrito bowls
Day 7	Pancakes from mix	Bean soup + crackers	Spaghetti aglio e olio with canned fish

★ PRO TIP

Children under stress often refuse unfamiliar textures and flavors. A small supply of their preferred familiar foods — even one recognizable item per meal — dramatically reduces mealtime conflict and maintains caloric intake. Stock one comfort item per child alongside the functional emergency foods.

📋 CHAPTER QUICK REFERENCE

- Plan family meals before an emergency — not during one
- One familiar comfort food per child per meal prevents mealtime breakdown

Arroz caldo and rice congee are the two most comforting, calorie-efficient emergency meals in the Filipino repertoire
7-day meal rotation keeps variety high across any extended emergency

PART FIVE

Digital Threats & Community

CHAPTER 18

Digital Disruptions and the Cashless Society

The Grid You Forgot You Were Depending On

🆕 NEW IN THIS EDITION

This chapter addresses the preparedness blind spot most households don't realize they have: the digital infrastructure underlying modern daily life — and what happens when it fails. Updated in the Ninth Edition for current AI-enabled scam threats and recent infrastructure incidents.

Almost every piece of critical infrastructure you use daily — your bank, your grocery store's inventory system, your water utility, your medical records, your communications — runs on networked computers. Not as a bonus feature. As a fundamental dependency.

In 2021, a ransomware attack on Colonial Pipeline shut down the largest fuel pipeline on the US East Coast for six days. Gas stations ran dry. Airlines cancelled flights. People panic-bought fuel in plastic bags. Nobody was hacked personally. The hack was on a billing computer. The fuel was there. The system for getting it to you was not. [25]

📖 REAL STORY: Ireland, May 2021

A ransomware attack on Ireland's Health Service Executive forced hospitals to cancel thousands of appointments, shut down diagnostic systems, and revert to paper records across the entire national health network. Chemotherapy patients were turned away. The attack cost over €100 million to recover from. The lesson for every household: digital infrastructure failure cascades into physical reality faster than most people expect.

Source: Ireland National Cyber Security Centre Post-Incident Report, 2021 [25].

The Five Digital Failure Scenarios You Should Prepare For

1. Payment System Failures

When point-of-sale systems go down — whether from a cyberattack on a payment processor, a regional internet outage, or a power failure — grocery stores, pharmacies, and fuel stations can only serve customers with cash. For the Philippines specifically: mobile payment systems (GCash, Maya) also require connectivity and power. Cash is the only payment method that works in a blackout.

💵 CASH RESERVE RULE

Keep a minimum 2-week emergency cash reserve in small denominations (coins and small bills) in your home. Assume ATMs will also be offline during the same event that takes down card readers.

2. Internet and Communication Outages

- Maintain printed copies of critical information: bank account numbers, emergency contacts, medical records, local maps.
- Own a battery or hand-crank radio tuned to your local emergency broadcast frequency (PAGASA / NOAA / BBC Radio).
- Download offline maps for your area (Google Maps, Maps.me) before an emergency.
- Keep a physical address book. Phone contacts stored only in the cloud are inaccessible when the cloud is down.

3. AI-Enabled Scams and Misinformation During Emergencies

Emergencies create information vacuums that malicious actors fill with convincing fake content. AI-generated voice scams impersonating family members in distress, fake evacuation instructions, counterfeit official announcements — these are documented present-day threats, not hypothetical future ones.

🔐 EMERGENCY VERIFICATION PROTOCOL

Establish a family code word before an emergency happens — a short, specific word known only to your household that confirms identity in an emergency call or message. If someone calls claiming to be a family member in distress and cannot provide the code word, hang up and call back on a known number.

Verify emergency instructions through official channels only: PAGASA official website and broadcast frequencies, NDRRMC official social media accounts (verified checkmarks). Unofficial WhatsApp and Facebook forwarded messages are not reliable sources during active emergencies.

Digital Resilience: The Non-Tech Toolkit

Vulnerability	Low-Tech Solution	Priority
No cash when cards fail	2-week emergency cash reserve in small bills	CRITICAL
No maps when GPS fails	Printed local maps + offline digital backup	HIGH
Lost contacts when cloud fails	Physical address book	HIGH
No emergency info without internet	Printed emergency contacts + medical info	HIGH
Scam calls impersonating family	Family code word established in advance	HIGH
No emergency alerts without internet	Battery/hand-crank radio on PAGASA frequency	HIGH
Supply chain disruption	Pre-built 30-day food reserve	HIGH

📋 CHAPTER QUICK REFERENCE

Keep 2 weeks' cash at home — in small bills — always

Establish a family code word before an emergency for identity verification

Printed maps + physical address book + offline phone maps = communication resilience

Your food and water reserve is also your digital infrastructure resilience

CHAPTER 19

Sanitation, Energy, and Medical Preparedness

Beyond Food: The Three Things Most Preparedness Books Skip

Sanitation: The Problem Nobody Wants to Think About Until They Have To

The least glamorous preparedness category is also one of the most life-threatening to ignore. Waterborne disease outbreaks — cholera, typhoid, dysentery — are the second major cause of death in disaster aftermaths, following direct disaster injuries. [28]

- Emergency toilet: A five-gallon bucket with a snap-on toilet seat, double-lined with heavy-duty garbage bags.
- Waste disposal: Seal full bags tightly and store in a dedicated outdoor area away from food and water sources.
- Handwashing: The single most effective infection prevention measure in any emergency. Stock bar soap generously.

Energy Independence: Reducing Grid Dependency

ENERGY RESILIENCE TIERS
TIER 1 — Portable Battery Banks: Charge phones, small devices, and lights. Buy three minimum. Recharge before any forecast storm.
TIER 2 — Butane / Propane Cooking: The household that can cook without grid power eats when others can't. 12+ canisters minimum for tropical climates.
TIER 3 — Solar Charging: A 100-watt portable solar panel and a power station can run a fan, charge devices, and power LED lighting indefinitely in sunny climates.
TIER 4 — Generator: Provides full household power for refrigeration, medical equipment, and major appliances. Stock 30 days of fuel minimum.
TIER 5 — Fixed Solar + Battery: Grid independence for sustained outages. High upfront cost, near-zero operating cost.

Medical Preparedness: The Category That Saves Lives

The Three-Month Medication Rule

Work with your doctor to maintain a minimum three-month supply of all prescription medications for every household member. Most insurance and prescription systems allow 90-day supplies. A person who runs out of blood pressure medication, insulin, or seizure medication during a two-week emergency faces a medical crisis layered on top of a logistics crisis.

Oral Rehydration Salts: The Tropical Life-Saver

Diarrheal disease is a serious adult threat during extended emergencies when water quality is compromised. Stock ORS packets generously — they are cheap, light, have a long shelf life, and are unambiguously effective. Homemade ORS: 1 liter clean water + 6 level teaspoons sugar + 0.5 level teaspoon salt. Mix completely. Use within 24 hours. [29]

📋 CHAPTER QUICK REFERENCE
Sanitation kills more people in disasters than the disaster itself — plan for it
Energy: build in tiers, not all at once — batteries first, solar second
3-month medication supply for everyone on regular prescriptions, minimum
ORS packets are the cheapest, highest-impact medical supply for tropical climates
First aid certification: one day, applies for life. Schedule it.

CHAPTER 20

Community Resilience and Barter

The Person Who Knows How to Feed a Crowd Is the Most Valuable Person in Any Crisis

Individual and household preparedness is the foundation. Community resilience is the structure built on top of it. No individual household can prepare for every possible scenario in isolation. No community whose individual households are prepared for nothing can survive a major disruption with its social fabric intact.

📖 REAL STORY: Typhoon Haiyan (Yolanda), Leyte, 2013

In the days immediately following Typhoon Haiyan, formal relief systems took time to reach interior barangays. What kept families alive in the interim was community. Neighbors who had rice shared it. Households with functioning water filtration shared water. The families who fared best were not necessarily those with the most supplies — they were the ones embedded in functioning social networks.

Source: NDRRMC After-Action Reports, 2013–2014 [16].

📖 REAL STORY: 2011 Tohoku Earthquake, Japan

The Tohoku earthquake and tsunami killed nearly 20,000 people. In the aftermath, communities that recovered fastest were those with strong pre-existing social networks — neighborhood associations (chonaikai) and local mutual aid systems. Researchers studying Tohoku recovery noted that communities with more active social ties showed faster economic recovery, lower rates of mental health disorders, and significantly better food security outcomes in the first three months.

Source: Japanese Cabinet Office Disaster Management, 2012 [31].

Philippine Barangay Preparedness Context

In the Philippines, the barangay system provides a pre-existing community infrastructure for disaster response. Know your barangay DRRM officer. Know where the barangay evacuation center is. Know your sitio's contact

tree. The Local Government Code mandates barangay-level DRRM councils under RA 10121 (Philippine Disaster Risk Reduction and Management Act of 2010). [4]

Barter Principles

Barter Category	Why It Has Value	Notes
Food staples (caloric-dense)	Universal demand, direct survival value	Rice, beans, canned goods — commodities
Water purification capability	Often overlooked until needed	Tablets, filters, fuel — high leverage
Medical supplies	Cannot substitute when needed	OTC medications, wound care, ORS packets
Fuel (propane, wood, diesel)	Energy dependency is universal	Store more than you think you'll need
Demonstrated skills	Cannot be consumed, stolen, or depleted	The ultimate barter asset
Seeds and planting stock	Medium-term food production	High value in extended disruptions

📋 CHAPTER QUICK REFERENCE

Know your two nearest neighbors' skills and supplies. Start there.

Know your barangay DRRM officer and evacuation center before you need them

The skill you can demonstrate is more valuable than anything you can stockpile

Tohoku, Haiyan, Maria: communities with social ties recover faster. Invest in yours.

PART SIX

Financial & Psychological Resilience

CHAPTER 21

Financial Resilience

The Emergency You're Most Likely to Actually Face

🆕 NEW IN THIS EDITION

This chapter is new to the Ninth Edition, addressing one of the most common reader-identified gaps: financial preparedness. Job loss is mentioned in almost every chapter of this book as a likely disruption scenario — yet most preparedness books devote more pages to dehydrating tomatoes than to emergency funds. Not this one.

Here is an uncomfortable truth: for most households, the emergency most likely to disrupt their food security is not a typhoon, a blackout, or a cyberattack. It is a lost job, a medical bill, a busted engine, or a month where the numbers simply do not add up. Financial fragility is the most common and most overlooked form of household vulnerability.

Food storage is a form of financial resilience — every meal from your pantry is a peso you did not spend at the grocery store when money is tight. But it works best when paired with the financial infrastructure that prevents the crisis in the first place.

The Emergency Fund: The Foundation of Financial Resilience

An emergency fund is money set aside specifically for unplanned essential expenses: job loss, medical emergencies, appliance failure, vehicle repair. It is not a savings account. It is a buffer that prevents you from going into debt every time life makes a sudden demand.

💰 EMERGENCY FUND TARGETS

MINIMUM TARGET: 1 month of essential expenses (rent/mortgage, utilities, food, medications). This is the floor that prevents a single bad month from

becoming a multi-month crisis.

STANDARD TARGET: 3 months of essential expenses. Covers most job loss scenarios where new employment is found within a quarter.

ROBUST TARGET: 6 months of essential expenses. The level at which a major disruption — serious illness, industry-wide layoff — can be weathered without panic.

Note: These are general planning guidelines. A financial professional can help you calibrate to your specific household situation, income volatility, and obligations.

Building the Emergency Fund on a Tight Budget

The standard advice to 'just save three to six months of expenses' fails people who are living paycheck to paycheck. Here is a more honest pathway:

1. Start with a goal of ₱5,000 (or your local equivalent of approximately $100). This alone covers most minor emergencies and gets the habit started.
2. Automate a small transfer — even ₱200 per week — to a separate account on payday. If it happens automatically, it doesn't require willpower.
3. Apply any windfalls (overtime pay, cash gifts, tax refunds) directly to the emergency fund until you reach one month of expenses.
4. Once one month is funded, expand toward three months incrementally. The first month is the hardest.

★ PRO TIP

Keep your emergency fund in a separate account from your daily spending — one that is slightly inconvenient to access. A little friction prevents impulsive withdrawals for non-emergencies. A savings account at a different bank works perfectly for this purpose.

Debt Management: Reducing Your Vulnerability

High-interest debt — credit card balances, informal loan arrangements, 'five-six' money lending — dramatically amplifies household vulnerability in

a financial emergency. When income drops, debt payments continue. The interest compounds.

The connection to food security is direct: a household spending 30% of its income on debt service has 30% less to spend on food, water, and preparedness. Debt reduction is preparedness.

A Simple Debt Reduction Approach

- List all debts with their balances, minimum payments, and interest rates.
- Pay minimum payments on all debts every month without exception.
- Apply any extra funds to the highest-interest debt first (the mathematically optimal approach) or the smallest debt first (the psychologically motivating approach).
- When one debt is paid off, add its former payment to the next debt — accelerating the payoff.
- Avoid taking on new high-interest debt except in genuine emergencies.

This is general guidance. For households in significant debt or complex financial situations, a qualified financial counselor can provide personalized guidance. Many NGOs and community organizations in the Philippines offer free financial literacy programs.

Income Diversification: Reducing Income Risk

The most dangerous financial position is total dependence on a single income source. If that source stops — whether through job loss, illness, business failure, or a family emergency — the household has zero income and full expenses.

Income diversification does not require starting a business. It can be as simple as:

- Developing a marketable skill that can be freelanced during or after a primary employment disruption.
- Maintaining relationships and networks in your industry so that a job search, if needed, is shorter.
- For families with two adults, both maintaining some employment history and earning capacity.
- A small productive garden that reduces food costs (this book has an entire chapter on that).
- Skills that can be bartered: cooking, repair, medical knowledge, mechanical skills.

Insurance: The Safety Net You Hope to Never Use

Insurance is the financial instrument specifically designed to prevent a single large bad event from being financially catastrophic. The most critical types for household resilience:

Insurance Type	What It Protects	Priority
Health insurance	Medical bills — the #1 cause of financial catastrophe in many countries	CRITICAL
Life insurance	Dependents' income if primary earner dies	HIGH if dependents
PhilHealth (Philippines)	Mandated health coverage — ensure it is active and updated	CRITICAL (Philippines)
SSS / GSIS (Philippines)	Disability, retirement, and certain emergency loan access	HIGH (Philippines)
Property insurance	Home and contents against typhoon, flood, fire damage	HIGH in typhoon zones
Business income insurance	Self-employed income during illness or disaster	Consider if self-employed

Insurance is not a preparedness luxury. It is a foundational risk management tool. Review your coverage annually. Ensure policies are current. Understand what is and is not covered before an emergency requires you to find out.

The Preparedness Budget: Integrating Financial and Food Security

Every peso you spend on preparedness should be weighed against its household resilience return. The tier-based budget framework in Chapter 5 already uses percentage-of-budget rather than fixed amounts for exactly this reason — it adapts to your actual financial situation rather than imposing an arbitrary cost.

A useful mental model: preparedness spending is insurance spending. A 30-day pantry is insurance against food price spikes, supply disruptions, and income shocks. The monthly investment is small. The protection is large.

📋 CHAPTER QUICK REFERENCE

Emergency fund target: 1 month minimum → 3 months standard → 6 months robust
Debt reduction is preparedness — high-interest debt amplifies every other vulnerability
Income diversification reduces the risk of any single income source failure
Health insurance and PhilHealth are non-negotiable household resilience tools
Every peso in your pantry is a peso you don't need to spend in a financial crunch

CHAPTER 22

Psychological Resilience

The Preparedness Category Nobody Puts in a Bucket

NEW IN THIS EDITION

This chapter is substantially expanded in the Ninth Edition, addressing one of the most significant gaps identified in reader feedback: the mental and emotional dimensions of emergency preparedness, including trauma management, family conflict, and long-duration stress.

Physical preparedness gets all the attention. Food. Water. Fuel. But disaster research consistently shows that psychological resilience — the capacity to maintain function, manage stress, preserve relationships, and keep moving forward — is as determinative of survival and recovery outcomes as material preparedness. [30, 31]

You can have a year's supply of food and still collapse if you have not thought about the human dimensions of extended emergency.

Understanding Disaster Psychology

The human stress response — what most people experience as fear, anxiety, irritability, or emotional numbness — is a normal physiological response to abnormal situations. In an emergency, you will experience it. Your family members will experience it. The question is not whether stress occurs but whether you have the framework and skills to work with it.

THE PHASES OF DISASTER PSYCHOLOGY

HEROIC PHASE (0–3 days): Adrenaline-driven action. People often feel energized and capable. Decision-making may be impaired despite apparent confidence.

HONEYMOON PHASE (3 days – 2 weeks): Relief that survival has occurred. Community bonds are strong. Optimism may be unrealistically high.

DISILLUSIONMENT PHASE (2 weeks – 1 year): Reality of sustained disruption sets in. Frustration, anger, grief, and fatigue become prominent. This is when psychological support is most needed and least available.

RECONSTRUCTION PHASE (1 year+): Gradual rebuilding of normalcy. With social support, most people show remarkable resilience.
Source: National Center for PTSD, FEMA, and WHO disaster psychology literature.

Managing Stress During an Emergency

Routine as an Anchor

Predictability reduces anxiety. Even in a disrupted environment, establish and maintain daily routines: consistent mealtimes, sleep schedules, morning and evening rituals. The specific activities matter less than the consistency. A family that wakes up, makes coffee, and eats breakfast together at the same time every day — even if that breakfast is instant oatmeal cooked on a camp stove — is doing something profoundly important for psychological stability.

Information Management

Continuous exposure to emergency news and social media updates is psychologically harmful during extended crises. Designate specific times to check official emergency information (twice a day is sufficient). Outside those times, minimize consumption of distressing news. This applies especially to children, whose stress responses are particularly sensitive to adult emotional states.

Physical Activity

Movement is one of the most effective stress regulators available. Even a 15-minute walk, some stretching, or a brief exercise routine dramatically reduces physiological stress markers. In an extended emergency, build movement into the daily routine deliberately — it will not happen automatically.

Family Conflict During Extended Emergencies

Stress amplifies existing family tensions and creates new ones. Resource anxiety, uncertainty, confined quarters, and role disruption are all generators of conflict. Pre-planning reduces — though does not eliminate — the intensity of conflict when it occurs.

Before the Emergency

• Discuss roles and responsibilities: who makes decisions about food use, when supplies are accessed, who maintains the inventory. Agreement made in calm conditions holds better than decisions made under stress.
• Establish a conflict resolution protocol: when disagreements escalate, who mediates? What is the decision-making process when adults disagree?
• Discuss children's questions honestly but age-appropriately. Children handle uncertainty better when given accurate information calibrated to their developmental stage than when they detect that adults are withholding information.

During the Emergency

• Give children meaningful jobs. Purposeful activity reduces anxiety in children and creates genuine household contribution. Assigning age-appropriate tasks — maintaining the checklist, organizing supplies, tending seedlings — is both practically useful and psychologically stabilizing.
• Preserve some normalcy: stories, games, music, shared meals. These are not frivolous. They are psychological infrastructure.
• Adults should find moments to decompress away from children. Sustained emotional containment is exhausting and eventually fails. Plan for it.

Trauma Management

A significant emergency — particularly one involving injury, loss, or prolonged danger — can produce traumatic stress responses. These are normal responses to abnormal events and do not indicate weakness or failure.

Recognizing Acute Stress Responses

• Intrusive memories or images of the traumatic event
• Emotional numbness or detachment from surroundings or loved ones
• Hypervigilance — being unable to relax or feel safe
• Sleep disturbances: nightmares, difficulty sleeping, or hypersomnia
• Irritability, anger, or mood changes that feel disproportionate
• Avoidance of reminders of the event

These responses, when they persist for more than a few weeks or significantly impair daily functioning, may indicate Post-Traumatic Stress

and benefit from professional support. In the Philippines, the Department of Health maintains psychological first aid programs through rural health units and hospital mental health services.

Psychological First Aid: The Immediate Response

Psychological First Aid (PFA) is the evidence-based immediate support framework endorsed by WHO, UNHCR, and the Red Cross for use in disaster settings. Its core principles, which any household member can apply, are straightforward:

🤝 PSYCHOLOGICAL FIRST AID: CORE PRINCIPLES
LOOK: Assess the situation. Who is distressed? What happened? What are the immediate needs?
LISTEN: Be present with the person in distress. You do not need to fix anything. Listening without judgment is itself therapeutic.
LINK: Connect people in distress with practical support — food, water, information, community — and with appropriate professional services when needed.
DO NOT: Do not force someone to talk about what happened. Do not offer false reassurance ('Everything will be fine'). Do not press for details of the traumatic event.
Source: WHO Psychological First Aid: Guide for Field Workers, 2011.

Grief and Loss

Disasters sometimes involve loss: of property, of livelihood, of loved ones. Grief is not a problem to be solved. It is a natural process that deserves recognition and time.

For households experiencing loss alongside emergency preparedness challenges, the priority is basic safety and immediate needs first, emotional processing second. Grief does not disappear with time alone — it requires safe relationships and eventually, for significant loss, professional support.

Children and Emergency Stress

Children are not small adults. Their stress responses differ by developmental stage, and their ability to process and communicate distress is more limited. Key principles:

• Maintain normalcy wherever possible: bedtime routines, familiar foods, familiar faces.
• Answer questions honestly, at an age-appropriate level. Do not lie or over-reassure.
• Watch for behavioral changes: regression to earlier behaviors (bedwetting, thumb-sucking), withdrawal, aggression, nightmares, or excessive clinginess can all indicate stress.
• Physical contact and play are stress regulators for children. Don't eliminate them even in a resource-constrained environment.

Long-Duration Stress: Months, Not Days

Most emergency preparedness literature implicitly assumes an acute emergency lasting days to weeks. But some scenarios — prolonged economic disruption, extended displacement, protracted infrastructure failure — create long-duration stress environments where the emergency state becomes the new normal.

In these scenarios, psychological sustainability becomes the binding constraint. The household that can maintain functional relationships, preserve some sense of meaning and purpose, and avoid complete routine collapse will outperform the household with more supplies but greater psychological fragility.

★ PRO TIP
One of the highest-return preparedness investments is a relationship with a mental health professional before an emergency — someone you already know and trust, who knows your history, and who you can contact when stress becomes unmanageable. In the Philippines, Hopeline (tel: 8804-4673) and the DOH mental health hotline are available resources.

📋 CHAPTER QUICK REFERENCE
Psychological resilience is as important as material preparedness — plan for it explicitly
Routine anchors stability in crisis: consistent mealtimes, sleep, rituals
Limit news consumption to twice daily; continuous exposure amplifies anxiety
Discuss roles and decision-making before an emergency — not during one

Children: give meaningful tasks, maintain normalcy, answer honestly at their level
For persistent acute stress responses, professional support is appropriate and available

PART SEVEN

Climate Guides

CHAPTER 23

Tropical and Hot Climate Preparedness

Asia, Southeast Asia, Africa, the Pacific, the Caribbean

CLIMATE ZONE

Philippines, Indonesia, Malaysia, Thailand, Vietnam, Bangladesh, Sri Lanka, Nigeria, Ghana, Kenya, Brazil, Colombia, Panama, Cuba, Jamaica, Puerto Rico, Hawaii, and similar tropical or humid subtropical climates.

Standard preparedness literature was written largely with temperate North American or European climates in mind. If you live in the tropics or humid subtropics, the standard guidance requires significant adjustment.

The Tropical Storage Problem

Storage Variable	Temperate Guideline	Tropical Adjustment
White rice in Mylar	25–30 years	15–20 years (above 85°F average without AC)
Rolled oats	30 years	10–15 years without climate control
Cooking oils	1–3 years	6–12 months (store in coolest location)
Canned goods	3–5 years optimal	2–3 years (heat accelerates quality loss)
Peanut butter	1–2 years	6–9 months (oils go rancid faster)
Dried beans	25–30 years	10–15 years (harder skin, longer cooking sooner)

WHY YOUR NUMBERS MAY DIFFER

Shelf life estimates for tropical climates vary significantly based on actual storage temperature, humidity control, and packaging quality. These figures assume minimal climate control (no air conditioning). Households with a

dedicated air-conditioned storage space can achieve significantly longer shelf lives.
Source: IRRI Grain Storage Manual for Tropical Climates [32]; USDA Complete Guide to Home Canning [17].

Typhoon and Monsoon Preparedness

Tropical emergency scenarios are dominated by typhoons, cyclones, and prolonged flooding. Elevated storage is critical: in a typhoon-prone area, keeping your entire food supply at floor level is a single bad night away from total loss.

☑ CHECKLIST: Tropical / Philippines-Specific
☐ All food storage elevated minimum 2 feet off floor
☐ Critical supplies in waterproof sealed containers
☐ Butane stove with 12+ canisters (primary, not backup cooking)
☐ Gravity-fed water filter (Berkey or ceramic equivalent)
☐ Silica gel desiccant in all dry storage containers
☐ Malunggay plant growing in yard or containers
☐ Know your barangay evacuation center location
☐ DRRM officer contact saved in phone + written copy
☐ Emergency fund in cash (ATMs and card readers fail in power outages)
☐ Battery-powered or hand-crank radio for PAGASA broadcasts [4]

📋 CHAPTER QUICK REFERENCE
Tropical shelf life is 30–50% shorter than temperate guidelines without climate control
Elevate all food storage minimum 2 feet above flood line
Silica gel desiccant in every sealed container — mandatory in the Philippines
Malunggay: plant one. The most nutritious, lowest-maintenance food source in the tropics.

CHAPTER 24

Cold Climate Preparedness

Northern Europe, Canada, Northern US, Russia, and Anywhere That Produces Real Winters

🌨 CLIMATE ZONE

Canada, Alaska, Northern US states, UK, Ireland, Scandinavia, Iceland, Northern Germany, Poland, the Baltic states, Russia, Northern Japan, and similar cold or cold-temperate climates.

📖 REAL STORY: Texas Winter Storm Uri, February 2021

Four million Texas households lost power during Winter Storm Uri. Many lost it for days. People died. Not because they lacked food — but because they lacked heat, and because they hadn't factored in that cooking options and water pipes would fail simultaneously. The lesson: in cold climates, heating is the first preparedness category. Food is second.

Source: FEMA After-Action Report, Winter Storm Uri, 2021.

The Cold Climate Storage Advantage

Storage Variable	Standard Guideline	Cold Climate Reality
White rice in Mylar	25–30 years	30+ years in cool basement storage
Rolled oats	30 years	30 years consistently achievable
Root vegetables (potato, carrot)	3–4 months typical	6–9 months in proper root cellar
Canned goods	3–5 years optimal	5+ years in cold storage
Cooking oils	1–3 years	2–4 years in cool storage

Cold exposure dramatically increases caloric requirements. A body maintaining core temperature in cold conditions can require 30 to 50 percent more calories than baseline. Prioritize calorie-dense fats in cold climate emergency food planning. [33]

📋 CHAPTER QUICK REFERENCE
In cold climates: heating first, food second, water third
Cold storage is an advantage — your basement is a natural food cellar
Plan +30–50% calories for extended cold weather scenarios
Prioritize fats for cold-weather caloric density

CHAPTER 25

Temperate and Four-Season Preparedness

UK, US Midwest, Central Europe, Southern Australia, New Zealand

Temperate climates occupy the preparedness middle ground: not extreme enough in either direction to force the adaptations of tropical or cold climate preparation, but variable enough that emergencies can show up in multiple forms across the same calendar year.

The temperate climate risk is a false sense of security: because conditions are rarely extreme, the urgency to prepare feels lower. The 2021 UK fuel shortage, the 2022 European energy crisis, and regular winter storm events are all reminders that moderate climate does not mean moderate risk.

The UK-Specific Context

The United Kingdom imports approximately 46 percent of its food. [34] This island geography creates significant supply chain vulnerability that the relatively mild climate tends to obscure. Focus on flour and baking supplies. Stock UHT milk (6–9 months ambient shelf life). Be aware that gas supply disruptions affect both heating and cooking simultaneously.

📋 CHAPTER QUICK REFERENCE
Temperate climate = false sense of security. Prepare anyway.
UK: 46% food imported — supply chain vulnerability is real and documented
Standard shelf life guidelines apply — but rotate regularly
Plan for multiple types of emergencies across all four seasons

PART EIGHT

Assessment & References

CHAPTER 26

The Household Resilience Score

Your Personal Readiness Assessment — Find Out Exactly Where You Stand

Most preparedness books tell you everything to do but nothing about where you actually are right now. The Household Resilience Score is a simple, honest assessment of your current preparedness level across seven core categories — now including financial and psychological resilience.

Category 1: Food Reserve (0–25 points)

Condition	Points
No meaningful food reserve (less than 3 days of real food)	0
72-hour kit in place per person	5
2-week reserve in place per person	10
30-day reserve in place per person	15
90-day reserve in place per person	20
6–12 month reserve in place per person	25

Category 2: Water Security (0–25 points)

Condition	Points
No stored water, reliant entirely on municipal supply	0
72-hour water supply per person in food-grade containers	5
2-week water supply per person stored	10
30-day water supply per person stored	15
Water purification method in place (filter, chemical, UV)	5
Two independent purification methods in place	+5 bonus

Category 3: Energy and Cooking Independence (0–20 points)

Condition	Points
No cooking capability without grid power	0
One emergency cooking method with fuel supply	8
Two independent cooking methods	14
Three or more cooking methods including a fuel-free option	18
Alternative heat source for home heating (cold climates)	+2 bonus

Category 4: Skills and Knowledge (0–20 points)

Condition	Points
No specific emergency food or preparedness skills	0
Basic first aid certification	4
Can identify and use at least one food preservation method	4
Active kitchen garden (any size, including containers)	4
Know how to sprout seeds for fresh nutrition	4
Foraging knowledge (5+ plants identified)	4

Category 5: Digital and Financial Resilience (0–15 points)

Condition	Points
No cash reserve, no offline information, no battery radio	0
2-week emergency cash reserve in small denominations	3
Battery / hand-crank radio tuned to emergency broadcast frequency	2
Printed critical documents (contacts, maps, medical info)	2
Family emergency code word established	3
Emergency fund of at least 1 month of essential expenses	3
Health insurance / PhilHealth active and current	2

Category 6: Psychological Preparedness (0–10 points)

NEW IN THIS EDITION

This category is new to the Ninth Edition, reflecting the growing recognition that psychological resilience is a core dimension of emergency preparedness, not an afterthought.

Condition	Points
No emergency plan, no discussion of stress management	0
Household has discussed roles and responsibilities before an emergency	3
Household has identified stress management strategies (routine, movement, limit news)	3
At least one adult household member has completed Psychological First Aid training	2
Household has access to a trusted mental health contact or professional	2

Category 7: Community and Documentation (0–10 points)

Condition	Points
No household emergency plan, no community connections	0
Written household emergency plan with evacuation route	3
Out-of-area contact designated and known by all household members	2
At least two neighboring households in informal preparedness network	3
Printed reference guides accessible without power	2

Your Score Interpretation

Total Score	Resilience Level	Priority Action
0–15	Critically Unprepared	Start with 72-hour food and water kit today.
16–30	Minimally Prepared	Expand to 30-day reserve. Add a cooking backup.
31–50	Moderately Prepared	Expand water and food to 90 days. Develop one skill.
51–70	Well Prepared	Push to 6-month reserve. Build community connections.
71–85	Seriously Prepared	Refine, rotate, and teach someone else.

86–105	Resilience Leader	You are the neighbor everyone will be glad to have.

★ PRO TIP

Retake this assessment every six months. Preparedness is not a destination — it is a maintenance schedule. Your score will improve as you build, and seeing the number go up is genuinely motivating.

CHAPTER 27

Checklists and Quick References

Everything You Need to Know, Organized So You Can Function Under Stress

Master Preparedness Checklist

72-Hour Minimum — Do This First

- 3 gallons water per person in food-grade containers
- 3-day supply of non-perishable food per person
- Manual can opener
- Basic first aid kit
- Flashlight with extra batteries
- Battery or hand-crank radio
- 7-day supply of prescription medications for all household members
- Copies of important documents in waterproof container
- Cell phone charger (portable battery bank)
- Cash in small denominations (assume cards won't work)

30-Day Expansion

- 30-gallon water storage per person (beyond 72-hour supply)
- Water purification method (filter + chemical backup)
- 30-day caloric supply per person
- Emergency cooking capability (camp stove + 12 fuel canisters)
- Multivitamin supply (30-day per person)
- Sanitation kit (bucket + bags + cat litter + soap + hand sanitizer)
- Written household emergency plan with meeting location
- 2-week emergency cash reserve in small bills
- Emergency fund started (even ₱5,000 / $100 counts as a start)

1-Year Foundation

- Complete 1-year pantry per person (see Chapter 5 tables)
- Long-term water storage or purification capability for indefinite use
- At least one renewable food production skill (garden, chickens, foraging)
- Food preservation capability (dehydrator, canning equipment, or fermentation setup)
- Three-month medication supply for all regular prescriptions
- Emergency fund of 3 months of essential expenses

- Health insurance / PhilHealth current and active
- Community network with at minimum two neighboring households
- First aid certification for at least one adult household member
- Solar charging capability or generator with 30-day fuel supply

Emergency Calorie Calculator

Household	Daily Calories	7-Day Total	30-Day Total	90-Day Total
1 adult (sedentary)	2,000	14,000	60,000	180,000
1 adult (active)	2,500	17,500	75,000	225,000
2 adults	4,400	30,800	132,000	396,000
2 adults + 2 kids	6,800	47,600	204,000	612,000
2 adults + 3 kids	8,400	58,800	252,000	756,000
4 adults	8,800	61,600	264,000	792,000

PART APPENDICES

Reference Materials

Appendix A: Emergency Pantry Master Inventory Template

Print and complete this inventory template for your household. Store a physical copy in your pantry and maintain a digital backup. Update quarterly (every two months in tropical climates).

Item (name + size)	Category	Qty	Purchase Date	Exp. Date	Zone
	Grain				
	Grain				
	Protein				
	Protein				
	Fat/Oil				
	Produce				
	Dairy				
	Sweetener				
	Supplement				
	Water				

Appendix B: Monthly Budget Paths (Tier-Based Framework)

Use these as percentage-of-budget targets, not fixed currency amounts. Scale to your household size and local pricing.

Month	Single Adult	Couple	Family of 4
1	50 lbs rice + oats + Mylar	100 lbs rice + oats + Mylar + buckets	200 lbs rice + oats + Mylar + buckets
2	30 lbs beans + lentils	50 lbs beans + lentils	100 lbs beans + lentils
3	36 cans fish	72 cans fish	144 cans fish
4	18 cans chicken + PB	36 cans chicken + PB	72 cans chicken + PB
5	Oils + ghee	Oils + ghee (dbl)	Oils + ghee (x4)
6	Powdered milk + eggs	Powdered milk + eggs (dbl)	Powdered milk + eggs (x4)
7	Flour + pasta + TVP	Flour + pasta + TVP (dbl)	Flour + pasta + TVP (x4)
8	Canned produce	Canned produce (dbl)	Canned produce (x4)
9	Freeze-dried veg (5 lbs)	Freeze-dried veg (10 lbs)	Freeze-dried veg (20 lbs)
10	Sweeteners + salt + spice kit	Same (dbl)	Same (x3)
11	Vitamins + water storage	Vitamins + water drums	Vitamins + 2 water drums
12	Full audit + comfort foods	Full audit + gaps	Full audit + comfort foods

Appendix C: Sprouting Quick Reference

Sprouting converts dry seeds into fresh, living food rich in Vitamin C, enzymes, and bioavailable nutrients. No garden required. Just water, a jar, and 3–7 days.

Seed / Legume	Soak Time	Days to Sprout	Nutritional Highlight
Mung beans	8–12 hours	3–5 days	Vitamin C, B vitamins, protein
Lentils (green/brown)	8 hours	2–3 days	Protein, iron, B vitamins
Chickpeas	12–18 hours	2–3 days	Protein, folate, manganese
Alfalfa seeds	4–8 hours	5–7 days	Vitamin K, calcium, antioxidants
Broccoli seeds	6–8 hours	5–6 days	Sulforaphane (very high) [35]
Radish seeds	6–8 hours	3–5 days	Vitamin C, peppery flavor, easy
Sunflower seeds (raw, unhulled)	12 hours	2–3 days	Vitamin E, healthy fats, protein
Peas (whole dried)	8–12 hours	2–3 days	Protein, Vitamin C, iron

Appendix D: Climate Zone Quick Comparison

Preparedness Factor	Tropical / Hot	Cold / Subarctic	Temperate / Four-Season
Storage shelf life	Significantly reduced without AC	Extended naturally	Standard guidelines apply
Biggest food threat	Heat, humidity, pests, mold	Heating failure, caloric deficit	Supply chain disruption
Water requirement	2.5–3 gal/person/day	1–1.5 gal/person/day (indoor)	1.5–2 gal/person/day
Key local crops	Moringa, cassava, kangkong, kamote	Potatoes, root veg, berries, cabbage	Seasonal rotation, alliums, legumes
Primary preservation	Dehydration, fermentation	Root cellaring, freezing, smoking	All methods applicable
Key emergency risk	Typhoon, flooding, power outage	Heating failure, blizzard, ice storm	Varied — storms, flooding, supply shock
Pest management	Monthly inspection essential	Seasonal, less intensive	Quarterly inspection sufficient

Appendix E: Digital Resilience Quick Checklist

☑ DIGITAL RESILIENCE CHECKLIST
☐ 2-week emergency cash reserve in small denominations — at home, not at the bank
☐ Battery / hand-crank radio tuned to local emergency broadcast frequency
☐ Printed local maps (your city + surrounding areas) — don't rely on GPS alone
☐ Physical address book with emergency contacts
☐ Printed medical information cards for each household member
☐ Family emergency code word established and known by all members
☐ Offline maps downloaded on smartphone (Google Maps / Maps.me)
☐ Important documents (ID, insurance, property records) backed up offline
☐ 3 portable battery banks, fully charged before storm season
☐ Verify official emergency channels: PAGASA / NDRRMC / local government only

Appendix F: Financial Resilience Quick Checklist

🆕 NEW IN THIS EDITION
New to the Ninth Edition.

☑ FINANCIAL RESILIENCE CHECKLIST
☐ Emergency fund started — even ₱5,000 / $100 is a beginning
☐ Emergency fund at 1 month of essential expenses
☐ Emergency fund at 3 months of essential expenses (standard target)
☐ Emergency fund at 6 months of essential expenses (robust target)
☐ Health insurance / PhilHealth membership active and current
☐ SSS or GSIS contributions current
☐ All debts listed with balances, minimums, and interest rates
☐ Debt repayment plan in place — highest-interest debt prioritized
☐ Insurance policies reviewed within the past year
☐ Income diversification considered: at least one supplementary earning option identified

Appendix G: Global Case Study Reference Index

This appendix summarizes the major case studies referenced throughout Survive · Eat · Repeat, Ninth Edition, with their key preparedness lessons and primary sources.

Event	Location & Year	Key Preparedness Lesson	Primary Source
Hurricane Katrina	New Orleans, USA, 2005	Community sharing beats individual stockpiling; 3-day reserves are inadequate	Red Cross After-Action Report, 2006
Texas Winter Storm Uri	Texas, USA, 2021	Cold climates: heating first; water pipe failure multiplies every vulnerability	FEMA After-Action Report, 2021
COVID-19 Supply Shock	Global, 2020	Supply chains fail fast; 30-day reserves transform a crisis into an inconvenience	WHO Situation Reports, 2020
Typhoon Haiyan (Yolanda)	Leyte, Philippines, 2013	Community social networks save lives; barangay systems work when engaged	NDRRMC After-Action Reports, 2013–2014 [16]
Colonial Pipeline Ransomware	USA, 2021	Digital infrastructure failures cascade to physical supply; cash reserves matter	US CISA Report, 2021 [25]
Ireland HSE Ransomware	Ireland, 2021	Healthcare infrastructure is vulnerable; medical supply buffers are critical	Ireland NCSC Post-Incident Report, 2021 [25]
Ukraine Power Grid Attacks	Ukraine, 2015–2016	Power grids can be turned off remotely; energy resilience = digital resilience	US-CERT ICS-CERT Reports, 2016 [27]
Tohoku Earthquake & Tsunami	Japan, 2011	Social ties = faster recovery; community food systems outperform individual stockpiles	Japanese Cabinet Office, 2012 [31]
Puerto Rico, Hurricane Maria	Puerto Rico, USA, 2017	Government relief has limits; community self-sufficiency is non-optional in island settings	Congressional Research Service, 2018
Canadian Wildfires	Canada, 2023	Evacuation is as important as sheltering; go-bags and fuel matter in wildfire zones	Canadian Red Cross, 2023

Appendix H: Beginner / Intermediate / Advanced Skill Guide

Level	Definition	Time Investment	Start Here
BEGINNER	Can be learned in a day or a single reading. No equipment required, or equipment is under $50.	1 day – 1 week	Yes — start immediately
INTERMEDIATE	Requires practice, basic equipment, and two to four weeks to build competence.	2–4 weeks	After beginner foundation
ADVANCED	Requires dedicated training, specialized equipment, and months of practice.	1–6 months	After intermediate foundation

Category	Beginner	Intermediate	Advanced
Food Storage	Build 72-hour kit; FIFO rotation	Build 30-day reserve; zone labeling	Build 1-year reserve; Mylar sealing
Water	Store 3-gallon supply; boiling	Chemical treatment; basic filtering	Layered treatment; rainwater harvest
Cooking	No-cook meals; camp stove basics	Dutch oven; flatbreads; thermal cooker	Solar oven; off-grid baking; cast iron
Preservation	Dehydrating fruits and vegetables	Lacto-fermentation; simple pickling	Pressure canning; salt curing; smoking
Growing Food	Container herbs; sprouting	Kitchen garden; seed saving	Full survival garden; food forest
Foraging	Identify 5 local safe plants	Identify 20 plants by season	Regional expert; mushrooms (with training)
Medical	First aid certification	Extended first aid; wound care	Wilderness medicine; herbal medicine
Financial	₱5,000 emergency fund; budget awareness	3-month emergency fund; debt list	6-month fund; income diversification
Psychological	Know the disaster stress phases; discuss with family	Develop household routines and plans	PFA training; mental health first aid certification
Digital Resilience	Cash reserve; physical address book	Offline maps; hand-crank radio	HF radio; mesh networking

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Companion Workbook: Your Personal Preparedness Plan

Knowledge without action is just a well-organized anxiety. This companion workbook section is designed to be filled in, referred to, and updated — not read once and forgotten.

My Household Profile

Category	Your Household Details
Number of adults	
Number of children (and ages)	
Any dietary restrictions or allergies	
Any medications requiring refrigeration	
Any household members with specific medical needs	
Pets (type and number)	
Climate zone	☐ Tropical ☐ Cold ☐ Temperate
Monthly essential expenses (for emergency fund target)	₱ / $ _____
Current emergency fund (months of expenses covered)	___ months
Current Household Resilience Score	_____ / 105 (date: _____)

My Preparedness Priority List

Priority	Action	Target Date	Done?
1			☐
2			☐
3			☐
4			☐
5			☐

My Emergency Contact Tree

Contact Role	Name	Phone	Location

Out-of-area family contact			
Neighbor 1			
Neighbor 2			
Local DRRM / Emergency officer			
Doctor / Medical contact			
Household meeting point	N/A	N/A	

My Skills Inventory

Skill	Who Has It	Confidence (1–5)	Next Step
First aid / CPR			
Food preservation (canning / dehydrating)			
Gardening			
Water purification / filtration			
Foraging (local plants)			
Fishing			
Mechanical repair			
Medical knowledge			
Financial planning / budgeting			
Psychological First Aid			
Digital security / communication backup			

My Financial Resilience Plan

Milestone	Target Amount	Target Date	Achieved?
Emergency fund — starter (₱5,000 / $100)			☐
Emergency fund — 1 month of expenses			☐
Emergency fund — 3 months of expenses			☐
Emergency fund — 6 months of expenses			☐
Highest-interest debt paid off			☐

Health insurance active and current			☐
Income diversification step identified			☐

My 90-Day Build Plan

Month	Focus	Budget	Items to Purchase	Done?
Month 1				☐
Month 2				☐
Month 3				☐

Afterword: Now Go Actually Do The Thing

You have read the book. That is step one, and it is further than most people get. Step one is meaningless without step two, which is doing something with what you've read before the information fades into the background hum of good intentions.

Pick the one thing you will do today. Not the comprehensive system. Not the full twelve-month reserve. The one thing. Maybe it is buying three extra cans of tuna at the grocery store. Maybe it is filling a clean jug with water and putting it in the back of the closet. Maybe it is setting aside ₱500 toward an emergency fund. Maybe it is taking the Household Resilience Score right now and writing the number down somewhere you will see it.

Then pick one thing for next week. Then the week after. Preparedness built one deliberate action at a time is preparedness that actually exists — as opposed to the kind that lives in a half-read book on a shelf and gets thought about briefly every time there's a news alert about a typhoon.

The goal was never to make you afraid. The goal was to make you capable. Capable people sleep better. They are more useful to their families, their communities, and themselves in normal times and extraordinary ones.

Whether you are in Manila preparing for the next typhoon season, in Manchester stocking up against the next supply disruption, in Minneapolis bracing for the next blizzard, or in Lagos thinking about the next fuel shortage — the fundamentals are the same. Food. Water. Skills. Community. Digital resilience. Financial resilience. Psychological resilience. In roughly that order.

Go stock your pantry. Go start your emergency fund. Put this book somewhere you can find it again. Tell at least one person what you learned. And — this is the part people skip — do the Household Resilience Score before you close the cover.

— M.R. Alo

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